

6-Week Learning and Exam Preparation Program

Course Breakdown and Lab Handout

Program Overview

This six-week program is designed to take learners from basic cloud concepts to exam readiness for the AWS Certified Cloud Practitioner (CLF-C02) certification. The course combines clear theory, AWS service awareness, practical demonstrations, review questions, and exam preparation.

Recommended Schedule

- Approximately 2 hours per session
- 1 practical or guided review activity each week
- Weekly quiz or knowledge check
- Final mock exam and targeted review in Week 6

Exam Domain Emphasis

- Cloud Concepts - 24%
- Security and Compliance - 30%
- Cloud Technology and Services - 34%
- Billing, Pricing, and Support - 12%

1. Week 1 - Cloud Foundations

Topics covered:

- Introduction to cloud computing
- Benefits of using the AWS Cloud
- CAPEX vs OPEX and pay-as-you-go pricing
- Cloud service models: IaaS, PaaS, and SaaS
- Public, private, and hybrid cloud models
- AWS Regions, Availability Zones, and Edge Locations
- High availability, scalability, elasticity, and fault tolerance
- Introduction to the AWS Well-Architected Framework

Lab 1: AWS Console Orientation

Sign in to the AWS Management Console, identify the active Region, locate EC2, S3, IAM, CloudWatch, and Billing, and compare regional and global services.

Weekly assessment: Cloud concepts quiz and simple architecture questions.

2. Week 2 - Compute, Storage, and Databases

Topics covered:

- Amazon EC2 and virtual servers
- EC2 instance types and basic pricing options
- Auto Scaling and Elastic Load Balancing
- AWS Lambda and serverless computing
- Containers: Amazon ECS, Amazon EKS, and AWS Fargate
- Amazon S3, EBS, and EFS
- Storage classes and basic backup concepts
- Amazon RDS, Aurora, DynamoDB, and database use cases

Lab 2: Launch and Explore Core AWS Services

Launch a small EC2 instance, inspect its basic configuration, create an S3 bucket, upload an object, and identify where EBS, EFS, RDS, and DynamoDB fit in a simple application.

Weekly assessment: Match AWS services to common workload requirements.

3. Week 3 - Networking and Application Delivery

Topics covered:

- Amazon VPC fundamentals
- Public and private subnets
- Route tables and Internet Gateways
- NAT Gateway
- Security Groups and Network ACLs
- Amazon Route 53
- Amazon CloudFront
- AWS Global Accelerator
- AWS VPN and Direct Connect
- Designing for high availability across Availability Zones

Lab 3: Build a Basic VPC Traffic Flow

Explore a VPC, public and private subnets, route tables, an Internet Gateway, security groups, and trace how a user request reaches a web workload.

Weekly assessment: Mid-course quiz covering Weeks 1-3.

4. Week 4 - Security, Identity, and Compliance

Topics covered:

- AWS Shared Responsibility Model
- AWS Identity and Access Management (IAM)
- Users, groups, roles, and policies
- Principle of least privilege
- Multi-factor authentication (MFA)
- Encryption at rest and in transit
- AWS KMS and AWS Certificate Manager
- AWS Secrets Manager and Parameter Store
- Amazon GuardDuty, Inspector, Macie, AWS WAF, and AWS Shield
- AWS Artifact and compliance concepts

Lab 4: IAM and Shared Responsibility

Review IAM users, groups, roles, and policies; apply least-privilege thinking; enable or review MFA; and classify security tasks as AWS or customer responsibilities.

Weekly assessment: Security and compliance scenario questions.

5. Week 5 - Monitoring, Management, Migration, and Modern AWS Services

Topics covered:

- Amazon CloudWatch and AWS CloudTrail
- AWS Config, AWS Health, and Trusted Advisor
- AWS CloudFormation and Infrastructure as Code
- Amazon SQS, SNS, EventBridge, and Step Functions
- Basic migration strategies and AWS migration services
- AWS Snow Family and data transfer concepts
- Introduction to analytics services such as Athena, Glue, Redshift, and Kinesis
- Introduction to AI and machine learning services such as SageMaker, Rekognition, Textract, Transcribe, Translate, Lex, and Polly

Lab 5: Monitoring and Event-Driven AWS

View CloudWatch metrics, inspect CloudTrail activity, review AWS Config or Trusted Advisor concepts, and follow a simple SNS/SQS/EventBridge or Lambda-based event flow.

Weekly assessment: AWS service identification and use-case quiz.

6. Week 6 - Billing, Cost Management, Support, and Exam Preparation

Topics covered:

- AWS pricing principles
- On-Demand, Reserved Instances, Spot Instances, and Savings Plans
- AWS Budgets and Cost Explorer
- AWS Pricing Calculator and Cost and Usage Reports
- AWS Organizations and consolidated billing
- Tagging and cost allocation
- AWS Support plans and support resources
- Review of all four CLF-C02 exam domains
- Exam question strategy and time management
- Final mock exam and targeted revision

Lab 6: Cost Review and Exam Readiness

Use AWS Pricing Calculator or Cost Explorer concepts to estimate a simple workload, review AWS Budgets and Support options, then complete a timed mock exam and remediation review.

Final assessment: Timed practice exam followed by review of weak areas before the certification exam.

Course Completion Goals

- Understand the main concepts and business benefits of cloud computing.
- Recognize the purpose of the core AWS services covered in the CLF-C02 exam.
- Understand basic cloud security, governance, monitoring, and cost management.
- Apply AWS concepts to short real-world and exam-style scenarios.
- Complete a timed practice exam and identify remaining areas for revision.
- Be prepared to sit the AWS Certified Cloud Practitioner (CLF-C02) exam at the end of the six-week program.